Newsletter of the North Dakota Nonpoint Source Pollution Task Force

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Multi-County Pipestem Creek Watershed Assessment Initiated

submitted by Terry Lund, Pipestem Creek watershed coordinator

Pipestem Creek

To help determine the condition of natural resources in the Pipestem Creek watershed, soil conservation districts (SCDs) in Foster, Stutsman and Wells counties requested the Natural Resources Conservation Service (NRCS) to assist them in a riparian stream assessment project. The assessment, which was recently completed, was part of a comprehensive inventory of the watershed.

The riparian stream assessment – in conjunction with the North Dakota Department of Health (NDDoH) water quality monitoring program and the local SCDs land-use assessment – will help determine whether additional technical and financial assistance for a land-treatment/water quality improvement project is needed.

NRCS planning staff randomly selected the inventory sites, chose the NRCS *Stream Visual Assessment Protocol* assessment tool, and provided training and "in-the-field" assistance to NRCS and SCD personnel from the Carrington and Jamestown field offices.

Thirty-five sites were selected for evaluation, from which field data was collected at the end of the 2000 harvest season, October 4 through October 12. The watershed area was evaluated in three separate reaches: reach 1 – Pipestem Creek downstream from the Sykeston Dam to the confluence of the Little Pipestem Creek; reach 2 – Little Pipestem Creek from its confluence with the Pipestem upstream to a point in Section 1, Township 144 North, Range 69 West in Stutsman County; and reach 3 – Pipestem Creek from its confluence with Little Pipestem Creek downstream to Section 19, Township 143 North, Range 65 West in Stutsman County.

Thirty of the 35 selected sites were inventoried and evaluated. However, five sites were not evaluated because of lack of observed flow or inaccessibility. Twelve sites were evaluated in Foster County, eight in Stutsman and 10 in Wells.

(***Pipestem*** *... cont. on page 2)*

(**Pipestem** ... *cont. from page 1)*

Preliminary analyses of the assessment results indicated moderate to significant sediment loads resulting in nutrient (e.g., phosphorus and nitrogen) enrichment. These, along with the presence of livestock waste, were the primary pollutants observed in all three reaches. High salinity levels also were observed in reach 1.

Bare/unprotected ground is a significant cause of decreased riparian health because it contributes to poor streambank root mass and eventually results in active lateral streambank cutting. Overgrazing also negatively impacts riparian health, as does excessive tillage and low-residue crop production, both of which increase sediment delivery to the stream.

The riparian stream assessment of the Pipestem Creek watershed highlights the importance of proper grazing practices on rangeland and management of tame pastures. It also confirms that native plant communities provide superior protection to the riparian zone as opposed to tame or introduced plants.

Land-use management, which enhances native plant communities through proper utilization and season of use, will significantly improve the watershed's riparian health and ultimately improve water quality in Pipestem Creek. However, a strong information and education program will be necessary to implement a successful watershed project.

N.D. Department of Agriculture Creates Dairy Pollution Prevention Program

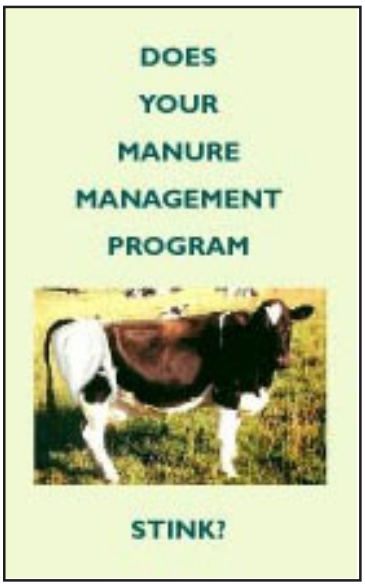
submitted by Jason Wirtz, DP3 Coordinator, North Dakota Department of Agriculture

In an effort to help the state's dairy producers comply with current and proposed animal feeding operation (AFO) regulations at the state and federal levels, the North Dakota Department of Agriculture has initiated the Dairy Pollution Prevention Program (DP3).

Funded by an Environmental Protection Agency Section 319 (Nonpoint Source Pollution Management Program) grant, the program's goal is to help improve water quality in areas impacted by the dairy industry. Assisting the Department of Agriculture are the North Dakota Milk Producers Association, the North Dakota Department of Health (NDDoH), the South Central Dakota RC&D Best Management Practices Engineering Team, the Natural Resources Conservation Service (NRCS), local watershed coordinators and/or soil conservation district staff and the North Dakota State University (NDSU) Extension Service.

As with other Section 319 projects, the DP3 offers technical, educational and financial assistance to the state's dairy producers in areas such as waste containment, clean water diversions and nutrient management planning. The program is designed to protect the state's surface and ground water in three ways: (1) directly, where surface water exists within the boundaries of the operation; (2) indirectly, where wastes would run off the farm property to reach surface water; and (3) indirectly, where ground waters are hydraulically connected to surface waters, whether on or off the farm property. Although dairy farmers are very concerned about water quality, they typically don't have the time or resources for design planning and construction. This program provides both.
In September 2000, Jason Wirtz became the DP3 coordinator. Since then, he has worked with the NDDoH, Region VIII EPA, NRCS, NDSU Extension Service and the state's dairy and livestock organizations. Wirtz also has met with many of the state's dairy producers to educate them about the program, to help them formulate dairy waste management plans, and to assist with field application of manure. Currently, he is working on a number of projects in different stages of development.

For more information about the DP3 program, contact Wirtz at 701.328.2216 or 1.800.242.7535.



Wild Rice River Watershed Range Workshop Held

submitted by Larry Lindberg,Wild Rice watershed coordinator

More than 30 people attended the Wild Rice Range Workshop.

The Sargent County Soil Conservation District, the National Resources Conservation Service (NRCS), the Section 319 Wild Rice River Watershed Project and the NDSU Extension Service held a range management workshop in Rutland, N.D., Feb. 16, 2001. Despite extremely cold weather, more than 30 participants attended.

Julie Hassebroek, county extension agent, and Roger Knapp, field agronomist with Ducks Unlimited, moderated the workshop.

Jeff Printz, Area II range conservationist, offered ranchers many valuable tips in his presentation. Subjects discussed included past uses of cattails by Native Americans; long-season grazing versus prescribed grazing; different grasses, weeds and shrubs; and how the "grass can be greener on your side of the fence."

Kevin Sedivec, NDSU Extension range specialist, spoke about managing for greener pastures, nutrition, cattle preferences for certain areas of pasture and many other subjects. Other speakers included Larry Lindberg, Wild Rice watershed coordinator (via videotape); Jesse Lisburg, private lands biologist, Tewaukon National Wildlife Refuge; and Ron Herr, NRCS district conservationist.

Lindberg discussed different cost-share practices the Section 319 Program has to offer. He urged ranchers to be aware of proposed EPA regulations regarding animal feeding operations (AFOs) and concentrated animal feeding operations (CAFOs). These regulations have the potential to impact anyone who feeds or raises livestock.

Lisburg provided information about federal wildlife programs and how they can coordinate with other available programs.

Herr informed the ranchers about cost-share programs the NRCS has to offer. He distributed information about the Environmental Quality Incentives Program (EQIP) and the Wetlands Trust. Herr stated that most of Sargent County is in the Wild Rice watershed area, so there may be EQIP funding available in addition to Section 319 funding.

Lower Knife River Subwatersheds Assessment Considered

submitted by Renee Skraba, Antelope Creek watershed coordinator

The Mercer County Soil Conservation District (SCD) and Water Resource Board (WRB) are planning a new assessment project. The project would address several tributary watersheds to the lower Knife River in Mercer County. Watersheds targeted for assessment include Elm Creek, Willow Creek, Coyote Creek, Brush Creek and two unnamed tributaries of the Knife River. The project encompasses about 247,040 acres. Located south of Golden Valley and Zap to the county line, this area is known locally as the "Nine Townships."

The assessment, called the Nine Townships Project, will include water quality sampling, riparian assessment and a land use inventory using the AGNPS (agricultural nonpoint source pollution) computer model. The SCD and WRB boards will hold informational meetings next winter to discuss the sampling results, to ascertain interest and to gather ideas.

After the public meetings, an implementation plan for the Nine Townships Project will be submitted to the Nonpoint Source Pollution Task Force. If approved, EPA 319 funding will be made available to support the implementation of conservation practices.

Livestock Waste System Is a Success in Beaver Creek Watershed

submitted by Scott Ressler, Beaver Creek watershed coordinator

The Beaver Creek Watershed has been the focus of a number of conservation efforts in Emmons, Logan and McIntosh counties. One recent accomplishment was the installation of a livestock waste management system in Emmons County that helped alleviate water quality/quantity concerns associated with a livestock feeding area on the Hanson Ranch.

The problem included both water quality and water quantity aspects. Too much water was flowing in from the hills around the Hanson Ranch headquarters. To make matters worse, this water ran through the feeding area, picking up livestock waste and nutrients (e.g., nitrate) and depositing them into a tributary of Beaver Creek.

After visiting the ranch, Scott Ressler, Beaver Creek watershed conservationist, worked with the rancher, Lyle Hanson, to develop a way to resolve the problem. After several visits, Hanson decided to proceed with a two-phase livestock waste system plan.

Because Hanson was interested in replanting the shelterbelt, Phase 1 of the plan called for removal of the old shelterbelt, installation of a clean-water diversion and replanting of the shelterbelt on the upper side of the clean-water diversion.

Phase 2 involved installation of a new well, tanks, a solids separator and an ag-waste pond.

Phase 1 immediately accomplished its goal of routing clean water around the ranch headquarters. A heavy rainfall occurred, and Hanson noticed that the amount of water coming through the yard had decreased. With the shelterbelt properly planted to catch snow, it is expected that spring snowmelt now will flow into the clean-water diversion rather than run through the feeding area.

For Phase 2, an ag-waste pond was constructed in the old feeding area to catch all the runoff from the new feedlot. Also installed was a solids separator made of concrete and designed to prevent any solids from entering the pond. This separator is designed to be easily cleaned out when the solids build up. In addition, two thermo-sink watering tanks and concrete feeding pads were installed.

To highlight the new system, the rancher hosted a tour for area producers, at which participants indicated a great deal of interest. In addition, Hanson has handled questions over the phone from other interested producers and has been a great help in promoting future systems.

This newly constructed storage pond located on the Hanson Ranch prevents livestock waste from reaching Beaver Creek.

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Pembina County Seventh Graders Tour Renwick Watershed To Better Understand NPS Pollution

submitted by Richard Webb, Lake Renwick watershed coordinator

Cavalier Public School seventh grade class watchs an NPS pollution demonstration.

Part of the annual Seventh Grade Conservation Tour in Pembina County is devoted to the nonpoint source (NPS) pollution and natural resource concerns of the Renwick Watershed.

Each year on the second Tuesday of September, seventh grade students from Cavalier, Crystal, Drayton, Neche, Pembina, St. Thomas and Walhalla gather at Icelandic State Park. The site for the tour is "the point" of Lake Renwick, which is the focus of a Section 319 water quality project. During the tour, students participate in demonstrations about wildlife, ecosystems, forestry, soils, and water quality and their interrelationships within the environment.

The water quality portion of the tour is designed to give students an understanding of a watershed, NPS pollution, potential sources of NPS pollution, impacts of NPS pollution on water quality and functions of a healthy riparian zone. A demonstration model known as Enviroscape shows students how pollution from residential, industrial and agricultural sources can all end up in the same water body.

A short walk to Lake Renwick's shore gives students the opportunity to see the aftermath of NPS pollution in the form of a residual algae bloom. After seeing for themselves the effects of NPS pollution, students discuss ways to help reduce or eliminate NPS pollution and how a healthy riparian zone benefits both water quality and wildlife.

Devils Lake Basin Board Begins Assessment Process

submitted by Michael Connor, manager, Devils Lake Joint Water Resource Board

The Devils Lake Basin Joint Water Resource Board will conduct a water quality assessment study in the northern portion of the Devils Lake basin during spring and summer 2001.

The North Dakota Department of Health's Division of Water Quality and the Natural Resources Conservation Service (NRCS) are cooperating in the study. Funding is provided through the Section 319 Nonpoint Source Pollution Management Program administered by the Department of Health and the Devils Lake Basin Joint Water Resource Board. The board's nine member counties include Benson, Cavalier, Eddy, Nelson, Pierce, Ramsey, Rolette, Towner and Walsh.

The eight water quality sampling sites included in the study are located on the Mauvais, Hurricane Lake, Calio and St. Joe, Starkweather and Edmore subbasin coulees.

The U.S. Geological Survey, which maintains gaging equipment at the sites, will furnish water flow information. Joint water resource board staff members will take water quality samples during spring runoff and during occasions of heavy summer runoff. In addition, watershed land use will be characterized by sampling about 300 upland crop and rangeland sites in the upper basin. These sites will be

*(**Devils Lake**...cont. on page 6)*

*(**Devils Lake** ... cont. from page 5)*

checked in early spring prior to the beginning of spring farm work and again after spring's work is completed. The local NRCS offices in the counties will coordinate site selection under the direction of Becky Clow, district conservationist.

Following completion of the water sampling, the results will be analyzed to determine any causes and sources of nonpoint source pollution in the upper Devils Lake Basin.

The project is designed to evaluate the condition of water resources in the basin and to identify the best corrective measures to maintain and/or restore the beneficial uses of the waters of the Devils Lake Basin.

Upcoming Events

Red River Basin Board Retreat
April 5 - 6, 2001
Morris, Manitoba

ND State Envirothon Competition
May 6 - 7, 2001
Wesley Acres Bible Camp - Dazey, N.D.

Project WET "Lewis & Clark's Big Muddy" - Missouri River Cultural History Institute
June 24 - 29, 2001
Western 4-H Camp - Washburn, N.D.

Project WET ND Summer Water Quality Institute
July 16 - 20, 2001
Western 4-H Camp - Washburn, N.D.

For more information on any of these events, contact Jim Collins at 701.328.5161.

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